

**INTERACTIVE TECHNOLOGIES IN THE TRAINING OF FUTURE SPECIALISTS OF PRIMARY EDUCATION IN  
KAZAN FEDERAL UNIVERSITY**

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**Abstract** The relevance of this study is due to new approaches to higher professional education. The main task of higher vocational school today is the formation of a responsible person, able to successfully organize their activities in problem situations with professional competence, moral consciousness, open-minded, able to constructively adapt to be competitive in today's tough job market. Education at the University shall form the thinking of future specialists capable of the birth of new original ideas and their realization, understanding of personal and socially relevant meanings. The purpose of the article is the research and development of science-based system of interactive technologies, the most effective in the training of undergraduate students of "Primary education" profile, future primary school teachers. The leading method to the study of this problem is a pedagogical experiment (notes forming and testing stages of the experiment), and the method of expert evaluations, statistical treatment of quantitative research results. The developed methodical system of the use of interactive learning technologies of undergraduate students contributes to the formation of social and personal and general culture, general science, tools and professional competence of future specialists of primary education in today's competitive job market. Article materials may be useful to teachers of higher educational institutions in the application of this method of formation of professional pedagogical competence of students in the educational process of high school. **Keywords:** interactive technology, undergraduate students, an elementary school teacher competence.

**Introduction** Relevance of the issue In modern conditions of development of society there is a need of new approaches to higher education, a look at the training of students - professionals of primary education from reproductive assimilation of knowledge aimed at the frontal forms of work with students it is necessary to find a student-centered approach based on the idea of prioritizing personal semantic development, the subjective experience of the personality, the individual pedagogical support. Specialist of primary education must not only possess a system of professional competence to be able to apply in practice the knowledge acquired in high school, but also be able to apply this knowledge in new and unusual situations that require human-box thinking and innovative approaches to solving problems. The use of interactive learning technologies at the University contributes to the formation of professional competencies of the specialist, the development of analytical thinking, creativity abilities of the individual (Vedishenkova, Efimova&Ryabova, 2015).

**Tendencies in organizational-content updating of educational process** The concept of technology in the modern sense is used primarily in the production (industrial, agricultural), various types of research and production of human activity and involves a complex of knowledge about methods of operations, actions of the production process, guaranteeing certain results. Thus, the leading signs of technology are collection (the Modern Journal of Language Teaching Methods ISSN: 2251-6204 Vol. 7, Issue 3, March 2017 Page 532 combination, compound), of some components; logic, sequence of components; methods, steps, operations (as components); guarantee of results. Pedagogical technology is the set of methods (methods, techniques, operations) of pedagogical interaction, creating conditions for the development of the participants of pedagogical process and involves determining the results of this development (Kashlev, 2000). Scientists distinguish the following functions of educational technology in the pedagogical process: 1) organizational-activity; 2) Designing (predictive); 3) communicative; 4) reflexive; 5) developing (Bespalko, 2002). The first function involves the organization of the teacher, conditions creations for the child activities by the teacher; teacher and child activities creations;

activities organizations by the child. The second function includes prevision of its possible results by participants of pedagogical process; modeling of pedagogical interaction; forecast of development of the child and the teacher in the implementation of educational technology. The third function reflects: communication activities of teachers and parents, members of the pedagogical process; information exchange between teacher and student; creating conditions of mutual understanding of the teacher and the pupil. The fourth function provides awareness of the teacher and the child in the current educational situation; assessment of the objective results of pedagogical interaction; understanding and mastering of experience of interaction; fixing the conditions and reasons for the development. The fifth function is a creation of conditions for the development of the child and the teacher; to provide the means of self-development of teachers and students. Relevance of educational process technological updating Research of Russian scientists shows that the word "interactive" is derived from "Interaction". Interaction is a purposeful interaction and mutual influence of the participants of pedagogical process, based on the personal experience of each (Kirylyuk&Korzh, 1996). When interaction is understood as the direct interaction of interpersonal communication, the most important feature that recognizes a person's ability to "take the role of another," imagine how it perceives the communication partner or group, and accordingly to interpret the situation, say their own actions (Peter &Yaroshevskii, 1998). Interaction is understood as an intensive process of dialogue, activities change and variety of activities; change of state parties (process). When the teacher interaction activities aimed at strengthening, intensification of activities of students and vice versa; system operations, activities, interaction between participants of the pedagogical process; purposeful reflection of participants in its activities, interactions; change and improve the behaviors and activities of the participants of pedagogical process (Bespalko, 2002). In the US, the interactive learning technology is based on the ideas of the theory of symbolic interactionism, which serve as the basis for the development of an environment conducive to the process of self-realization of students in learning activities. In works of John G. Meade, G.Blumera they examine theoretical and methodological principles of the concept of interaction. The main focus is directed on interactive learning dialogue between partners which leads to personality socialization. During the socialization of the individual develops the values of various symbols developed in the community, and thereby more successful in the process of entering into a social "role" and perceives the installation "generalized another" (Blumer, 2001). According to American scientists, interactive learning contributes to the development of communication skills, ability to work in a group, make informed decisions, and most importantly to self-development of the man, the ability to present themselves as objects of his own thoughts (Mead, 2009). In Germany, since the late 70's - early 80-ies interactive technologies in education are in priority: training, programming, computer training, educational panel discussions, case-study (analysis of specific, practical situations), business and role-playing games. Especially business communication skills, training for managers at various levels who have success in the performance of official duties determined by the high level of interpersonal skills formed with other people got a wide popularity. Business communication training aims to develop in students not only effective interpersonal skills, but also to improve the general level of competence in this field, enhancing leadership potential. In today's Germany they use the method of Case-study, which involves the transition from the method for activity-accumulation of knowledge, practice-oriented approach. This is one of the Modern Journal of Language Teaching Methods ISSN: 2251-6204 Vol. 7, Issue 3, March 2017 Page 533 most experienced methods in the practice of teaching decision-making skills and problem solving in Germany. The purpose of this method is to teach students to analyze information, identify key issues to choose alternative solutions, evaluate them, and find the best option to formulate a program of action. In the analysis of concrete situations it is particularly important that there is an individual work of students combined with problem situations and group discussion of proposals prepared by each member of the group. This allows students to develop the skills of the group, teamwork (Teamarbeit),

which expands the opportunities for solving common problems in the framework of the study curriculum subjects. As a result of the analysis of individual, group discussions, identifying problems, finding alternatives, the choice of actions and their implementation plan students have the opportunity to develop the skills of analysis and planning. In France, in the late 80s of the 20th century, widespread forms of interactive learning as a workshop or atelier (workshop or atelier ZHFEN - "The French group New Education") were popular. Workshop - one of the technologies of intensive training, including each of the participants in the "self-construction" of their knowledge through a critical attitude towards the available information to the received, and decisions on their own creative tasks. The advantage of this technology is the education of the person of the new formation, confident in their abilities and capabilities, able to build relationships with peers and adults, taking into account the opinions of others with the skills of self "construction" of knowledge , self solving of creativity tasks (Bassis, 1995) .

Relevance of educational process technological updating Native and foreign scientists mean training dialog under interactive learning technology, in which takes part the interaction of all participants. The word "interactive" is derived from the word "interact" (Eng.), Where the "inter" - mutual, "act" - to act. "Interactivity" means the ability to interact or to be in the mode of dialogue. Under interactive technology we understand the ways of organizing the system of interaction of the teacher and students in the form of training of the dialog, guaranteeing a pedagogically effective cognitive communication, in which conditions for students experiencing a situation of success in educational activity are created, their mutual motivational, intellectual, emotional, and other areas. Interactive learning technology of students at Kazan Federal University aimed at developing pedagogical values of future specialists of primary education, the development of students' ability to learn, critically analyze and interpret information, to put forward original ideas, to be able to protect them. These skills acquired at university, not only contribute to the assimilation of the students of the program material, but will succeed in the future professional activity (Kamalova&Ulianitskaya, 2014). Communicative competence and skills in the group largely provide social competence of the teacher and the achievement of success in life (Khairova, 2014). Interactive technologies create conditions for the development of psychological and educational workshops, contributing to a better understanding of their point of view (Gromova&Alimbekov, 2015). Primary school teacher must have such professional competences that will enable him to work with young people with deviant behavior (Novik&Podgórecki, 2015), children from children's homes (Ribakova, Parfilova, Karimova&Karimova, 2015). In the learning process interactive technologies allow teachers to create a special learning environment, design training situation creatively, ensuring increase the activity of students in the acquisition of knowledge and skills, create conditions for the formation of professional competence of future specialists of primary education (Kamalova, 2015).

Methodological Framework In the experimental work we used such interactive learning technologies, as brainstorming, role play, project method. Experimental studies involved 166 undergraduate students 1 and 2 courses of the Institute of Psychology and Education, Kazan Federal University, studying the profile "Primary education". In the first phase of the experiment (stating) during the 1 semester of 2013-2014 academic year on a practical training on children's literature at the 2nd year students were used reproductive teaching methods. Students were offered questions that did not require the analysis of a problem situation, the arguments of their own opinions on the works of children's Modern Journal of Language Teaching Methods ISSN: 2251-6204 Vol. 7, Issue 3, March 2017 Page 534 writers: who narrates in the stories of V.A. Oseyeva? What is the perspective of the story of L. Panteleev "Frank word"? What are the characteristics of creative style of V.P. Kataev in fairy tales for children? 1 year students were offered following questions on phonetics: What is sound? What is the system of vowels and consonants of the Russian language? Which of famous linguists studied the phonemes? According to the results of the 1st phase of experiment in December 2013 students of 1 (106 pers.). And 2 courses (60 pers.) were offered to structure an examination of the material, its classification, analysis and synthesis. Results and

Discussions Development and introduction of an educational process monitoring system at a higher education institution The results of ascertaining stage of the experiment showed that students had not coped with the task. Ordering of educational material - 28%; classification of the facts, phenomena, events - 24%, analysis of artistic images of children's literature - 29%; Analysis of linguistic phenomena in Russian - 25%; generalization of the conclusions of section studying "Phonetics" and "Children's Literature" - 26% and 28%, respectively. These results showed that we should use such training technologies that would form reflexive and analytical skills, socio-personal, general science, tools and professional competence of future specialists of primary education. Experimental work on the second phase of the study (formative experiment) on interactive teaching students of 1 course was organized during the 2nd semester, students of 2 courses - within 4 semesters. At the workshops on "phonetics" and "Children's Literature" we used such forms of online learning as "brainstorming", role playing, and project method. Effective form of online learning is "brainstorming", which allows developing of students' creative thinking, the ability to compare and contrast, think of associations, images, think of "conjecture." In the context of "brainstorming" there is a dialogue, which acts as a mean to remove all barriers to free the creative energies of its participants. The purpose of the "brainstorming" is collecting as many ideas freed from the inertia of thinking. During the "brainstorming" Students worked in small artistic groups from 4 to 6 people. The selection of the ideas produced special experts who recorded all sounded ideas and selected the most correct and original, considering the creative goals and objectives of its decision. Solution of the given task At the seminars "brainstorming" on "phonetics" "The concept of the phoneme in the Moscow and Leningrad phonological schools" students of 1 course were offered such problematic issues: 1. How do the concepts of "phoneme" and "sound" in MFSH and LFSH relate? 2. What is the assessment of phonetic sounds [ə] and [ɪ] LFSH and MFSH. 3. What is the same and what is different and MFSH and LFSH opinion on the recognition of the importance of soft phonological velar [g] [k], [h]. 4. What are the differences between MFSH and LFSH about the sounds [ʃ], [ʒ] reveal the essence of the phonological system of each of the schools? "Brainstorming" allowed to create the necessary conditions to enhance the educational and cognitive activity of students, interest in the training sessions; initiate independent mental activity; the development of the creative potential of the individual student; prevent fatigue, creating a comfortable environment for the training and education of the future specialist; to create conditions for formation of professionally significant personal qualities of students. Practice class on children's literature on the topic "The debate about children's literature in the 20-ies of XX century" held at the 2nd year students in the form of a "brainstorming". "Do children need fairy tales?" The purpose of the "brainstorming" was to collect the number of original ideas as much as possible. The work was organized in small groups of 5-6 people. To prepare for this lesson, students were given the problematic issues: 1. Do you agree with the statement of N.K.Krupskaya that the fairy tale distracts the child from real life: it reflects the ideology of the bourgeois world; it embodies the mysticism and religiosity? Modern Journal of Language Teaching Methods ISSN: 2251-6204 Vol. 7, Issue 3, March 2017 Page 535 2. Prove the justice of Gorky: "Children under the age of 10 require fun, and it is a biological law." 3. Is the writer S. Marshak right, claiming that all children's writers should learn from the fairy tale? What to learn, what do you think? 4. "Let gravity of the child to the magic, fantasy, mystery and imagination - then mutilate it, interfere with the normal development of the personality," claimed Lunacharskii. Do you agree with this statement? 5. Do modern children need fairy tales? Why? Explain your answer. Preparing for this class contributed to the formation of the whole complex of reflective, analytical and methodological skills of the students, their general cultural competences. During the "brainstorming" students learnt to debate, to put forward their own ideas, to defend their point of view, to generalize, to give examples of read works of children's literature. Work in small groups of artists contributed to the organization of educational dialogue, formation of communicative skills, reflective and analytical abilities of students. During the formative experiment, we

actively used role-playing games. Educational point of role games is to strengthen students' thinking, to increase the independence of the future expert, to make a creative spirit in training to prepare for professional practice. The system of active learning, we used several modifications of role-playing: 1) simulation; 2) operational; 3) the performance of roles; 4) the method of staging.

1 year undergraduate students of the Department of Pedagogy and Methods of primary education of the Institute of Psychology and Education KFU summarized the results of the study course "Phonetics" in the form of role-playing game "Trial of illiteracy." The students were given the task of the word creative works, interpretation, acting game, decoration present form of the hearings with all the trappings of modern justice. Role-playing game "Trial of illiteracy" has allowed undergraduate students to demonstrate in-depth knowledge and skills in phonetics, an opportunity for participants to present their ideas in small groups, to form problem-solving skills, learn the art of dialogue from each other, develop their creativity and ability to present complex material in accessible and understandable form. The main result of that class was that students were willing to further research activities, the realization of creative projects, to continue learning in an interactive way.

2nd year undergraduate students prepared to practical training on the course "Children's Literature" a role play scenario "Playground folklore." The aim of the event was: 1) to learn how to organize their own activities, to determine the methods for solving professional problems, evaluate their effectiveness and quality; 2) to search for, analyze and assess information needed for formulating and solving professional problems, professional and personal development; 3) use of information and communication technologies to improve the professional activity; 4) work in a team and the team to interact with the team members; 5) to develop creative thinking, imagination and fantasy.

At the stage of forming experiment Students performed the task of theoretical generalization and design, constructing tasks. These tasks were related to the analysis, synthesis, generalization of empirical data and the formulation of hypotheses; designing theoretical model studies, the experimental setup, abstraction, forecasting, designing.

1 course undergraduate students on the subject "Phonetics" were given the task designing of the following type: 1. To find the interaction of phonetics and orthoepy in the textbooks of Russian language of primary school. 2. To make a classification of the most common mistakes of primary school pupils in the phonetic parsing of words. Modern Journal of Language Teaching Methods ISSN: 2251-6204 Vol. 7, Issue 3, March 2017 Page 536 3. To find general laws to systematize material on phonetics in various Russian language textbooks for primary schools.

During the study course "Children's Literature" (4th semester) 2nd year students were given a project assignment: 1. Learn the content of textbooks in literary reading. Make the classification of children's folklore works. 2. Make a table "Classification of works of children's folklore in the textbooks of literary reading" 3. Read the content of literary reading. Make a plan for an oral presentation on the topic "The subjects of proverbs and sayings in books of literary reading". 4. In literary reading textbooks find what lullabies folk songs are studied by younger students. Determine the means of artistic expression in lullabies. 5. Find out what tongue twisters are studied by primary school pupils; which articulation of sounds are they directed; what is the topic of patterns? Reserves and recommendations

On the third stage of experimental work (control) at the end of May 2014 students 1 and 2 courses have been given the following tasks aimed to check maturity of reflective- analytical, problem-analytical and creative competences of future specialist of primary education. 1st year students were offered to draft "Textbooks elementary school in the Russian language: a reflection of the views of leading scientists philologists Moscow and St. Petersburg phonological schools"; 2 year students to draft a "Creative portrait of children's writer of the XIX century" (Pushkin, P.P. Ershova, V.F. Odoevsky); "Creative portrait of children's writer of XX century" (K.I. Chukovsky, B.V. Zahoder, E.N. Uspensky). Implementation of effective educational technologies complex introduction

Analysis of completed projects showed that in the formative experiment the students of 1 and 2 courses formed reflexive and analytical skills, substantive and methodological competencies: 1) reflexive and analytical skills: the ability to allocate

most importantly, 85%; the ability to analyze material- 87%; ability to organize material- 89%; the ability to classify the material 86%; the ability to draw conclusions and generalizations of 88%, the ability to put forward original ideas and defend them- 84%, the ability to dream, imagine- 83%; teamwork - 92%; 2) substantive competence: willingness to use knowledge of scientific bases of the course content of elementary school - 67%; positive attitude to the subject matter - 78%; conscious possession of specialized terminology to the extent necessary in connection with the contents of the educational material - 79%; ability to interpret and organize scientific information on the subject- 84%; the ability to tailor the content to the capabilities of the discipline of students with 89%; 3) methodological competence: willingness to plan, select, to synthesize and design the training material on subjects - 87%; willingness to organize various forms of study on subjects - 79%; willingness to implement the activity approach to learning and the ability to organize educational work of younger schoolboys - 85%; willingness to use innovative technologies of education- 94%. Thus, interactive technologies create conditions for the formation of "ability to learn", the development of problem-analytical, problem-reflective and creative thinking in the educational process in the creation of situations, constantly requires new solutions for increasingly complex and gradually learning tasks. Solution of the given task

Modern native and foreign education science in a new way studies the content of education in a new way. However, in the Russian pedagogical practice is still dominated informational technology, while the objective needs of society makes the problem of the widespread introduction of developmental and personality-oriented technologies. Modernization of the Russian education is aimed not only at changing the content of subjects, Modern Journal of Language Teaching Methods ISSN: 2251-6204 Vol. 7, Issue 3, March 2017 Page 537 but also at changes of teaching methods approaches, expanding the arsenal of teaching methods, the revitalization of the students in the class. Reserves and recommendations Studies, held by scientists show that the prevalence of reproductive approaches create indifferent attitude to learning among half of the students, and a negative attitude among the third. That is why in the field of higher professional education, it is important that the student was not only a passive object of exposure but could find the information independently and exchanged views on a specific topic with their peers, take part in discussions, find arguments to perform a variety of roles. Interactive learning requires the use of special forms of organization of cognitive activities, and poses very specific and predictable targets, such as creating a comfortable learning environment and the inclusion of students in the educational interaction that makes the process of productive learning. Compared to traditional training in interactive teaching changes the interaction of the teacher and students' activity the teacher gives students a place of activity and the task of the teacher is to create conditions for the initiative. Therefore, it is necessary to generate social and active initiative creative personality, developing natural inclinations, tendencies and personality of each student through the use of interactive learning technologies. Conclusions Thus, in the course of training undergraduate students at Kazan Federal University were used such interactive technologies such as "brainstorming", role playing, project method, in which students completed tasks that contribute to the formation of professional competencies: 1) empirical tasks - collection, classification and systematization of data on the studied process or phenomenon; 2) setting a theoretical generalization - analysis, synthesis, generalization of empirical data and formulation of the hypothesis; 3) designing, design tasks - design a theoretical model studies, the experimental setup, abstraction, forecasting, designing; 4) promotional tasks - practical implementation of the model study in a real school of reality requiring manifestations of organizational, communication, planning, adjustment and management qualities of the future specialist; 5) analytical tasks - tasks requiring manifestation abilities to analyze the results of implementation of recommendation and make conclusions by monitoring and regulation, to give an objective assessment of the results, summarize, draw conclusions and set new challenges in research. Each type of task includes such content through which we can identify, build and develop research, professional skills of

the student, dominant style of mental activity during the performance of work. During assignments the student performs the transformation of mastered knowledge and skills of a specific professional basis. Education at the University shall form the thinking of future specialists capable of the birth of new original ideas and their realization, understanding of personal and socially relevant meanings.

References

Bassis, A. (1995). Learn new means to break with the old knowledge. St. Petersburg.

Bespalko, V.P. (2002). Pedagogy and advanced learning technologies. Moscow.

Bloomer, G. (2001). Social problems such as collective behavior, Kazan, Publishing House of the Kazakh. University Press.

Gromova, C.R. & Alimbekov, A. (2015). Egocentrism and Development of Students Identity (On the Example of Studying of Future Teachers). *International Journal of Environmental and Science Education*, 10(4), 571-578.

Kamalova, L.A. & Ul'yanitskaya, T.V. (2014). The study of the pedagogical values of the future elementary school teachers. *Life Science Journal*, 11(10s), 522-526.

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Kamalova, L.A. (2015). Formation of Professional Competences of "Primary Education" Profile Students While the Studying Process at the University, *Review of European Studies*, 7(1), 94-100.

Kashlev, S.S. (2000). Modern technologies of the pedagogical process. Minsk, University.

Khairova, I.V. (2014). Development of communicative competence of pupils by means of cooperative training. *Education and self-development*, 4 (42), 67-73.

Kyrylyuk, L. G. & Korzh V. (1996). Collection methods. Minsk.

Mead, J.D. (2009). Favorites, Moscow: +Academia.

Novik, N.N. & Podgórecki, J. (2015). A Model of Developing Communication Skills among Adolescents with Behavioral Problems. *International Journal of Environmental and Science Education*, 10(4), 579-587.

Petrovsky, A.V. & Yaroshevskii, M.G. (1998). Short psychological dictionary. Rostov-onDon.

Ribakova, L.A., Parfilova, G.G., Karimova, L.Sh. & Karimova, R.B. (2015). Evolution of Communicative Competence in Adolescents Growing Up in Orphanages. *International Journal of Environmental and Science Education*, 10(4), 589-594.

Shurkina, E.Y., Petrova, E.V., Petrova, G.D., Shirokov, L.V., Astaf'eva, I.A., Gatsenbiller, N.Y., Kharisova, G.M. & Masalimova, A. R. (2015). Designing a Model of Interaction of Economic Resources in the Quantization Conditions of Economic Area. *Mediterranean Journal of Social Sciences*, 6(2 S3), 129-135.

Vedishenkova, M.V., Efimova, E.V. & Ryabova, E.V. (2015). Student's Research Work as the Condition of Continuity of General and Professional Education. *International Journal of Environmental and Science Education*, 10(4), 533-542.